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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
10 087,953	03 05 2002	Markus Beer	87361,3380	5350

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EXAMINER

LAWRENCE JR. FRANK M

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 06 02 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Application No.

Applicant(s)

10/087.953

BEER ET AL

**Office Action Summary**

Examiner

Art Unit

Frank M. Lawrence

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either on an application data sheet or supplemental oath or declaration.

### ***Information Disclosure Statement***

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Priority***

3. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Europe on December 8, 2001. It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

### ***Specification***

4. The disclosure is objected to because of the following informalities: page 17 of the specification should be canceled.

Appropriate correction is required.

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5. Claims 10 and 11 are objected to because of the following informalities: It appears that method claims 10 and 11 depend from apparatus claim 8 in error. The claims should be amended to depend from claim 9, which is assumed for examination. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 4-6 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claims 4-6 and 12 each recite the limitation "the woven filter fabric" or "the nonwoven filter mat". There is insufficient antecedent basis for these limitations in the claims. Claims 4-6 should be amended to depend from claim 2.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language

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10. Claims 1-4, 6-8 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Braun et al. (5,656,368).

11. Braun et al. ('368) teach a pleated fibrous filtration face mask comprising at least two layers that are point-bonded using ultrasonic or thermal welding in a grid pattern that makes up 0.5-15% of the filter surface (see figures 1, 2, 4, 12, col. 7, lines 20-43). The layers are welded between a horn and anvil of an ultrasonic welding apparatus with the second layer 21 facing the horn (see figure 7, col. 14, line 49 to col. 15, line 12). The pleated layer 12 can be a non-woven polypropylene and has an average pore size of less than 150 microns (see col. 8, lines 28-31, col. 9, lines 1-12), and the second layer can comprise polypropylene and be woven (see col. 10, lines 7-14).

12. Claims 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by McGaw, Jr. (6,451,205).

13. McGaw, Jr. ('205) teaches a filter manufacturing process, comprising arranging mesh and spunbond filter layers (43, 47, see col. 4, lines 13-20) in a gap between upper and lower molds (60, 70), ultrasonically welding the layers together with a sonotrode and anvil at a seam around the edge of the filter causing the layers to bond with thermal heating, and removing the filter from the mold, wherein a mesh layer faces each side of the mold with respect to a spunbond layer during welding (see abstract, figures 1-4 and 13).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 5 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun et al. ('368) in view of McGaw, Jr. ('205).

16. Braun et al. ('368) disclose all of the limitations of the claims as discussed in paragraph 11 above except that the particle retention of the woven filter fabric is 10-60 microns and that the welding process involves placing the filter layers between molds. McGaw, Jr. ('205) discloses an ultrasonic welding process for a filter using molds. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Braun et al. ('368) by using a mold instead of a continuous belt process in order to provide a batch process for producing single filter elements that have a specific weld pattern that cannot be easily achieved using a continuous belt, and to provide any appropriate porosity based on the filtering application, taking into consideration contaminant size and the acceptable pressure drop across the filter.

### *Conclusion*

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references listed on the attached PTO-892 form disclose layered filters bonded together using ultrasonic or thermal welding.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 703-305-0585. The examiner can normally be reached on Mon-Thurs 7:30-5:00; alternate Fridays 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-3318. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Frank Lawrence



Patent Examiner 5-29-03

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May 29, 2003